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REMARKS

Applicants cancel claims 1, 27, and 30. Claims 2-26, 28-29, and 31 remain pending in the application. Applicants amend claims 2-5, 26, 28, and 31 to independent form incorporate the features of their respective base claims. Applicants note that claim 28 should have depended from claim 27, and, therefore, amend claim 28 to incorporate the features of canceled claim 27. Correspondingly, Applicants amend claim 29 to properly depend from claim 28. No new matter has been added.

Applicants, again, acknowledge with appreciation the Examiner's finding that claims 24-25 and 28-29 contain allowable subject matter. Applicants amend claim 28 to independent form, and respectfully submit that claim 2, from which claim 24 depends, is patentable as demonstrated below. Accordingly, Applicants request that the Examiner allow claims 24-25 and 28-29.

Claim 1 was rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,159,591 to Gohara et al. Applicants cancel claim 1.

Claims 2-23, 27, and 30-31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gohara et al. in view of U.S. Patent No. 5,392,280 to Zheng; and claim 26 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Gohara et al. in view of Kobayashi et al. Applicants respectfully traverse the rejections.

Zheng describes providing the status of buffer occupation at switch 12 to another switch 10, which interrupts asynchronous transmission of data to switch 12 if there is insufficient buffer space at switch 12. Thus, Zheng only describes flow control from one switch to another. And again, Gohara et al. describe an ATM switcher, as shown in Fig. 1 of Gohara et al., that includes a switching section 3 for switching cells, a receiving-side transmission-line interface section 2

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that includes a received cell buffer 21, and a transmitting-side transmission-line interface section 4 that includes a transmitted cell buffer 41.

It would, therefore, not have been obvious to one skilled in the art to combine Zheng and Gohara et al. in the manner proposed by the Examiner without improper hindsight from the claimed invention. Again, Zheng only describes asynchronous transmission flow control at a transmitting switch according to a buffer condition of a receiving switch. And therefore, a combination of Zheng and Gohara et al. would have, at most, suggested flow control at a transmitting switch—corresponding to switch 10 described in Zheng—according to a condition of an input buffer—corresponding to the receiving-side interface section 2 described in Gohara et al.—of a receiving switch, which corresponds to switch 12 described in Zheng. Neither reference discloses or suggests a switch unit having a processor for performing back pressure control on a buffer of the processor according to a connected buffer in the switch unit—e.g., section 2 illustrated in Fig. 1 of Gohara et al.

Thus, even assuming, arguendo, that it would have been obvious to one skilled in the art to combine Zheng and Gohara et al., the combination would still have failed to disclose or suggest the claimed feature of a processor having a third buffer and fourth buffer connected to a first buffer for an input and the second buffer for an output of an interface within the same communication apparatus, where the processor performs back pressure control on the third buffer when the first buffer assumes a predetermined state.

In other words, such a combination of references would still have failed to disclose or suggest,

“[a] communications apparatus for switching among different interfaces and comprising a switch unit, the switch unit comprising:

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a main switch for switching data of a fixed length; and
an interface having a first buffer for an input of the main
switch and a second buffer for an output of the main switch,
wherein the communications apparatus further comprises a
processor that is connected to the switch unit and processes data
according to a predetermined protocol, the processor having a third
buffer and a fourth buffer connected to the first buffer and the
second buffer, the processor performing back pressure control on
the third buffer when the first buffer assumes a predetermined
state,” as recited in claim 2. (Emphasis added)

Accordingly, Applicants respectfully submit that claim 2, together with claims 6, 9, 13, 17, 20, and 23-24 dependent therefrom, is patentable over Gohara et al. and Zheng, separately and in combination, for at least the above-stated reasons. Claims 3-5 incorporate corresponding features of the processor performing back pressure control on the various buffers when another one of the buffers within the communication apparatus assumes a predetermined state. As such, these claims, together with claims 7-8, 10-12, 14-16, 18-19, 21-22, and 25, are patentable over the cited references for at least the same reasons.

Regarding claim 31, neither Gohara et al. nor Zheng disclose or suggest the claimed feature of sending the back pressure control request to another apparatus without switching. In other words, the combination of these references would still have failed to disclose or suggest,

“[a] communications control method for switching among
different interfaces, comprising the step of:
switching data handled by the different interfaces after once
buffering data of a fixed length related to the data handled by the
different interfaces;
sending the switched data to the circuits after once
buffering the switched data; and
sending the back pressure control request to another
apparatus bypassing switching of the back pressure control request
when the buffering assumes a predetermined state prior to
switching,” as recited in claim 31. (Emphasis added)

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Accordingly, Applicants respectfully submit that claim 31 is patentable over Gohara et al. and Zheng, separately and in combination, for at least the foregoing reasons.

With respect to claim 26, none of the cited references disclose or suggest the claimed feature of a working system in a switch unit receiving a back pressure control request from a passive system discards the back pressure control request. Applicants respectfully submit that claim 26 is patentable over the cited references for at least this reason.

The above statements on the disclosure in the cited references represent the present opinions of the undersigned attorney. The Examiner is respectfully requested to specifically indicate those portions of the respective reference that provide the basis for a view contrary to any of the above-stated opinions.

Applicants appreciate the Examiner's implicit finding that the additional references made of record, but not applied, do not render the claims of the present application unpatentable, whether these references are considered alone or in combination with others.

In view of the remarks set forth above, this application is in condition for allowance which action is respectfully requested. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

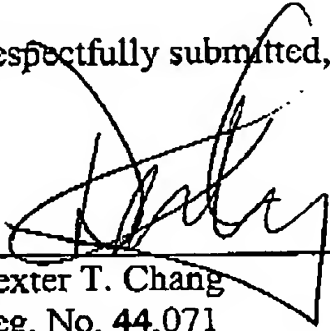
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Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,


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